

Appln No. 09/471,208
Amdt date September 6, 2005
Reply to Office action of April 4, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) In a computer network allowing communication between a host computer and a plurality of remote user computers, a method for packaging a single 3D animated content data for distribution to the remote user computers over a network connection, the method comprising:

identifying a set of pre-load data preloaded by a remote user computer for being delivered over the network connection before playback of the single 3D animated content;

storing the pre-load data in a pre-load file;

identifying first and second streaming data respectively having first and second data sizes for being streamed over the network connection during playback of the single 3D animated content, the first and second streaming data being respectively associated with first and second scenes of the single 3D animated content;

identifying a data rate available to the remote user computer for streaming the first and second streaming data;

identifying a first duration of a first scene and a second duration of a second scene;

storing the streaming data for the first and second scenes in first and second stream files associated with the scenes, each stream file being of a size calculated from the identified data rate and the duration of the respective scene, each stream file being packaged into a plurality of data blocks, each data block being associated with a start transmission time; [[and]]

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allocating an excess portion of at least the first streaming data to the pre-load file responsive to a determination that the first data size is bigger than the size calculated for the first stream file;

assigning a start transmission time to a first of the plurality of data blocks based on a size of the first data block and the identified data rate;

assigning a start transmission time to each successive data block based on its respective size and the identified data rate;

recursively updating a start time of a previous data block based on the calculation of the start transmission time of the successive data block; and

streaming each stream file over the network connection during playback of the respective scene, the stream file calculated to finish downloading by the remote user computer prior to the end of the playback of the respective scene.

2. (Original) The method of claim 1, wherein the streaming data is animation data.

3. (Canceled)

4. (Currently Amended) The method of claim [[3]] 1 further comprising:

identifying a time in which each streamable block is required by the remote computer during playback of the scene; and

determining the position of each block in the stream file based on the identified time, the position calculated to allow the remote user computer to download the block prior to the time the block is required.

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5. (Original) The method of claim 1, wherein the pre-load file includes a header portion and a body portion, the header portion including a directory of files used for playing the 3D animated content, and the body portion including the pre-load data.

6. (Original) The method of claim 5, wherein the header portion includes a type code and a location code, the type code for indicating a file type of each file listed in the directory, and the location code for indicating a file location of each file listed in the directory.

7. (Original) The method of claim 1 further comprising pre-loading the pre-load file before playback of the 3D animated content.

8. (Original) The method of claim 1, wherein the 3D animated content is a multipath movie with a plurality of plot alternatives, the method further including streaming additional stream files associated with each plot alternative capable of being selected by a user after the stream file associated with the scene is loaded by the remote computer.

9. (Currently Amended) In a computer network allowing communication between a host computer and a plurality of remote user computers, a system for packaging a single 3D animated content data for distribution to the remote user computers over a network connection, the system comprising:

means for identifying a set of pre-load data preloaded by a remote user computer ~~for being delivered over the network connection~~ before playback of the single 3D animated content;

means for storing the pre-load data in a pre-load file;

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means for identifying first and second streaming data respectively having first and second data sizes for being streamed over the network connection during playback of the single 3D animated content, the first and second streaming data being respectively associated with first and second scenes of the single 3D animated content;

means for identifying a data rate available to the remote user computer for streaming the streaming data;

means for identifying a first duration of a first scene and a second duration of a second scene;

means for storing the streaming data for the first and second scenes in first and second stream files associated with the scenes, each stream file being of a size calculated from the identified data rate and the duration of the respective scene, each stream file being packaged into a plurality of data blocks, each data block being associated with a start transmission time;
[[and]]

means for allocating an excess portion of at least the first streaming data to the pre-load file responsive to a determination that the first data size is bigger than the size calculated for the first stream file;

means for assigning a start transmission time to a first of the plurality of data blocks based on a size of the first data block and the identified data rate;

means for assigning a start transmission time to each successive data block based on its respective size and the identified data rate;

means for recursively updating a start time of a previous data block based on the calculation of the start transmission time of the successive data block; and

means for streaming each stream file over the network connection during playback of the respective scene, the stream file calculated to finish downloading by the remote user

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computer prior to the end of the playback of the respective scene.

10. (Original) The system of claim 9, wherein the streaming data is animation data.

11. (Canceled)

12. (Currently Amended) The system of claim ~~[[11]]~~ 9 further comprising:

means for identifying a time in which each streamable block is required by the remote user computer during playback of the scene; and

means for determining the position of each block in the stream file based on the identified time, the position calculated to allow the remote user computer to download the block prior to the time the block is required.

13. (Original) The system of claim 9 wherein the 3D animated content is a multipath movie with a plurality of plot alternatives, the system further including means for streaming additional stream files associated with each plot alternative capable of being selected by a user after the stream file associated with the scene is loaded by the remote computer.

14. (Currently Amended) In a computer network allowing communication between a host computer and a plurality of remote user computers, a system for packaging a single 3D animated content data for distribution to the remote user computers, the system comprising:

a pre-load file storing a set of pre-load data preloaded by a remote user computer ~~for being delivered over the network connection~~ before playback of the single 3D animated content;

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a stream file storing the streaming data for being streamed over the network connection during playback of the single 3D animated content;

a mass storage device for storing the pre-load file and the stream file; and

a production module in communication with the mass storage device, the production module including logic for:

identifying the pre-load data for the single 3D animated content and first and second streaming data respectively having first and second data sizes for a scene of the single 3D animated content, the first and second streaming data being respectively associated with first and second scenes of the single 3D animated content;

storing the identified pre-load data in the pre-load file;

identifying a data rate available to the remote user computer for streaming the first and second streaming data;

identifying a first duration of a first scene and a second duration of a second scene;

storing the streaming data for the first and second scenes in first and second stream files associated with the scenes, each stream file being of a size calculated from the identified data rate and the duration of the respective scene[.], each stream file being packaged into a plurality of data blocks, each data block being associated with a start transmission time;

allocating an excess portion of at least the first streaming data to the pre-load file responsive to a determination that the first data size is bigger than the size calculated for the first stream file;

assigning a start transmission time to a first of the plurality of the data blocks based on a size of the first data block and the identified data rate;

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assigning a start transmission time to each successive data block based on its respective size and the identified data rate; and

recursively updating a start time of a previous data block based on the calculation of the start transmission time of the successive data block.

15. (Original) The system of claim 14, wherein the streaming data is animation data.

16. (Canceled)

17. (Currently Amended) The system of claim ~~[[16]]~~ 14, wherein the streamable blocks is allocated a position in the stream file based on a time in which each streamable block is required by the remote user computer during playback of the scene, the position calculated to allow the remote user computer to download the block prior to the time the block is required.

18. (Original) The system of claim 14, wherein the pre-load file includes a header portion and a body portion, the header portion including a directory of files used for playing the 3D animated content, and the body portion including the pre-load data.

19. (Original) The system of claim 18, wherein the header portion includes a type code and a location code, the type code for indicating a file type of each file listed in the directory, and the location code for indicating a file location of each file listed in the directory.

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20. (Original) The system of claim 14 further including an Internet connection for delivering the pre-load file and the stream file to the remote user computers.

21. (Original) The system of claim 20 further including a projector module for loading the pre-load file and streaming the stream file for playing the animated content.

22. (Currently Amended) A computer-implemented method for delivering a single media production to a remote device over a data communications network, the method comprising:

identifying a data rate available to the remote device;

identifying first media content associated with a first portion of the single media production and second media content associated with a second portion of the single media production;

identifying a first duration of the first portion of the single media production and a second duration of a second portion of the single media production;

allocating a first size to a first stream file based on the identified data rate and the first duration, and a second size to a second stream file based on the identified data rate and the second duration;

inserting at least a portion of the first media content associated with the first portion into the allocated first size of the first stream file, and at least a portion of the second media content associated with the second portion into the allocated second size of the second stream file, each stream file being packaged into a plurality of data blocks, each data block being associated with a start transmission time; [[and]]

allocating an excess portion of at least the portion of the first media content to an upfront file pre-loaded by the remote device prior to playback of the media production responsive to a

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determination that a size of the portion of the first media content is bigger than the first size of the first stream file;

assigning a start transmission time to a first of the plurality of data blocks based on a size of the first data block and the identified data rate;

assigning a start transmission time to each successive data block based on its respective size and the identified data rate;

recursively updating a start time of a previous data block based on the calculation of the start transmission time of the successive data block; and

streaming the first and second stream files to the remote device.

Claims 23-24 (Canceled).

25. (Currently Amended) The method of claim [[24]] 22, wherein each data block is assigned a priority in the stream file based on a type of data transported by the data block.

26. (Previously Presented) The method of claim 25, wherein the first and second portions of the media production are first and second scenes of the media production.

27. (Canceled)